

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for setting up a real time data call in a mobile communication system, comprising:

setting up a control path between an origination base station controller (BSC), a termination BSC and a mobile switching center (MSC) controlling the origination and termination BSCs when a call is set up between an origination side mobile station and a termination side mobile station;

transferring bearer information between the origination BSC and the termination BSC through the set up control path, wherein transferring bearer information comprises:

sending a request from the origination BSC to the MSC along the control path for Connection Management service carrying required information, for setting up a radio link with the origination side mobile station upon reception of a call set up message from the origination side mobile station,

sending a request from the MSC to the termination BSC along the control path for a termination number for a call, to set up a radio link between the termination BSC and the termination side mobile station, and

transferring bearer information of the termination BSC to the origination BSC along the control path, and transferring a response to the bearer information from the origination BSC to the termination BSC along the control path, to form the bearer path;

setting up ~~a~~the bearer path between the origination BSC and the termination BSC by using the bearer information transferred along the control path; and

transferring real time video data of at least one of the origination side mobile station and the termination side mobile station between the origination BSC and the termination BSC through the set up bearer path without using traffic resources of the MSC.

2. (Original) The method of claim 1, wherein setting up the call comprises:

defining a new option for a real time video call related to a speech call and a data call;

inputting a termination side number in the newly defined option to initiate a real time video data call; and

setting up origination and termination calls by the origination side and termination side mobile stations, the corresponding BSCs, and the MSC.

3. (Previously Presented) The method of claim 1, wherein only the bearer path and the control path are set up during the call set up and wherein no other traffic path is set up.

4. (Original) The method of claim 1, wherein the origination side mobile station and the termination side mobile station define a new service option for real time video data before the call is set up.

5. (Canceled)

6. (Currently Amended) The method of claim [[5]] 1, wherein if the bearer information and the response transferred to the origination BSC and the MSC are not transferred within a prescribed period of time, then a transfer error is determined to have occurred.

7. (Previously Presented) The method of claim 6, wherein re-transfer of the bearer information and the response transferred between the termination BSC and the origination BSC is attempted for a prescribed number of times if the transfer error has occurred.

8. (Currently Amended) The method of claim [[5]] 1, wherein the bearer information of the termination BSC comprises a bearer address of the termination BSC.

9. (Currently Amended) The method of claim [[5]] 1, wherein the response to the bearer information comprises a bearer address and synchronization information.

10. (Original) The method of claim 1, further comprising clearing the call and bearer path after the real time video data has been transferred.

11. (Original) The method of claim 10, wherein clearing the call and bearer path comprises:

 sending a request from the origination BSC to the MSC to clear the bearer path;

 transferring a clear command from the MSC to the origination and termination BSCs; and

 sending a message from each of the origination and the termination BSCs to the MSC to inform the MSC of the completion of the clearing.

12. (Original) The method of claim 10, wherein a control path channel is used for communication between each of the origination and termination BSCs and the MSC.

13. (Currently Amended) The method of claim 1, wherein the video data is transferred at a rate of at least 1 Mbps between the origination side mobile station and the termination side mobile station using the set up bearer path.

14. (Previously Presented) A mobile communication system, comprising:

an origination base station controller (BSC), configured to manage and control at least one origination device;

a termination BSC, configured to manage and control at least one termination device;

a mobile switching center (MSC), configured to control the origination and termination BSCs; and

a router coupled to form a direct bearer channel corresponding to a bearer path between the origination BSC and the termination BSC to allow for real time transfer of video data between the at least one origination device and the at least one termination device,

wherein bearer information to set up the bearer path is transferred between the origination BSC and the termination BSC through control paths between the origination BSC, the termination BSC and the MSC, the control paths being different than the bearer path, and

wherein real time video data of at least one of the origination device and the termination device is transferred between the origination BSC and the termination BSC through the formed direct bearer channel without using traffic resources of the MSC.

15. (Previously Presented) The system of claim 14, wherein a data rate of the video call is at least 1 Mbps.

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16. (Previously Presented) The system of claim 14, wherein the least one origination device comprises an origination mobile terminal and at least one origination base station transceiver configured to form a radio interface with the origination mobile terminal.

17. (Currently Amended) The system of claim 14, wherein the at least one termination device comprises a termination mobile terminal and at least one termination base station transceiver configured for a radio interface with the at least one termination mobile terminal device.

18. (Currently Amended) The system of claim 17, wherein the at least one termination mobile terminal device is identified by an International Mobile Subscription Identifier (IMSI), and wherein the least one origination device provides the IMSI to the router to establish the direct bearer channel to the at least one termination mobile terminal device.

19. (Previously Presented) The system of claim 14, further comprising a home location register configured to provide storage of position information and process the position information of a plurality of mobile stations within the network.

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20. (Previously Presented) A mobile communication system, comprising:
- origination and termination mobile stations;
 - at least one first Base Transceiver Station (BTS) to form a radio interface with the origination mobile station;
 - an origination BSC configured to manage and control the first BTS;
 - at least one second BTS to form a radio interface with the termination mobile station;
 - a termination BSC configured to manage and control the second BTS;
 - a mobile switching center (MSC) to control calls of the origination BSC and the termination BSC;
 - a home location register connected to the MSC for storage and processing position information for paging subscribers of the mobile stations; and
 - a router to establish a direct link between the origination BSC and the termination BSC to carry a real time video data call,
- wherein bearer information to establish the direct link is transferred between the origination BSC and the termination BSC through control paths between the origination BSC, the termination BSC and the MSC, the control paths being different than the direct link, and
- wherein real time video data of at least one of the origination and termination mobile stations is transferred between the origination BSC and the termination BSC through the direct link without setting up a traffic path through the MSC.

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21. (Previously Presented) A method for setting up a real time data call in a mobile communication system, comprising:

setting up a call between an origination side mobile station and a termination side mobile station;

transferring bearer information along control paths between an origination base station controller (BSC) and a termination BSC through the set up call to set up a bearer path between the origination and termination BSC, portions of the control paths being different than the bearer path; and

transferring real time video data of at least one of the origination side mobile station and the termination side mobile station between the origination BSC and the termination BSC through the set up bearer path,

wherein transferring the bearer information comprises:

sending a request from the origination BSC to a mobile switching center (MSC) along one of the control paths for Connection Management service carrying required information, for setting up a radio link with the origination side mobile station upon reception of a call set up message from the origination side mobile station;

sending a request from the MSC to the termination BSC along one of the control paths for the termination number for a call, to set up a radio link between the termination BSC and the termination side mobile station; and

transferring bearer information of the termination BSC to the origination BSC along the control paths, and transferring a response to the bearer information from the origination BSC to the termination BSC, to form the bearer path.

22. (Previously Presented) The method of claim 21, wherein if the bearer information and the response transferred to the origination BSC and the MSC are not transferred within a prescribed period of time, then a transfer error is determined to have occurred.

23. (Previously Presented) The method of claim 22, wherein re-transfer of the bearer information and the response transferred between the termination BSC and the origination BSC is attempted for a prescribed number of times if the transfer error has occurred.

24. (Previously Presented) The method of claim 21, wherein the bearer information of the termination BSC comprises a bearer address of the termination BSC.

25. (Previously Presented) The method of claim 21, wherein the response to the bearer information comprises a bearer address and synchronization information.

26. (Canceled)

27. (Previously Presented) The method of claim 1, wherein portions of the control paths are different than the set up bearer path.

28. (Previously Presented) The system of claim 20, wherein the router is separate from the MSC.

29. (Previously Presented) The method of claim 21, wherein transferring the real time video data includes transferring the real time video data through the set up bearer path without passing the real time video data through the MSC.

30. (New) The mobile communication system of claim 14, wherein the bearer information to establish the direct link is obtained by:

sending a request from the origination BSC to the MSC along one of the control paths for Connection Management service carrying required information, for setting up a radio link with the origination device upon reception of a call set up message from the origination device,

sending a request from the MSC to the termination BSC along one of the control paths for a termination number for a call, to set up a radio link between the termination BSC and the termination device, and

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transferring bearer information of the termination BSC to the origination BSC along the control path, and transferring a response to the bearer information from the origination BSC to the termination BSC along the control paths, to form the bearer path.

31. (New) The mobile communication system of claim 20, wherein the bearer information to establish the direct link is obtained by:

sending a request from the origination BSC to the MSC along one of the control paths for Connection Management service carrying required information, for setting up a radio link with the origination mobile station upon reception of a call set up message from the origination mobile station,

sending a request from the MSC to the termination BSC along one of the control paths for a termination number for a call, to set up a radio link between the termination BSC and the termination mobile station, and

transferring bearer information of the termination BSC to the origination BSC along one of the control paths, and transferring a response to the bearer information from the origination BSC to the termination BSC along one of the control paths, to form the bearer path.